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ABSTRACT OF THE DISCLOSURE

A transmission method and a network system can accommodate STM, ATM and IP in a single network by newly proposing a frame network to be used in common in physical layer and data link layer. The transmission method includes transmitting a plurality of packets in multiplexing manner, which header in each packet includes a first field holding a signal indicative of a packet length, a second field holding a signal indicative of a preferential order upon transferring the packet, a third field holding a signal indicative of a kind of traffic, a fourth field holding a signal indicative of a header length, a fifth field holding a control signal depending upon the kind of traffic, and a sixth field holding a signal indicative of a result of CRC operation of the header, a payload holding information signal depending upon kind of the traffic and a signal indicative of a result of CRC operation of the payload.